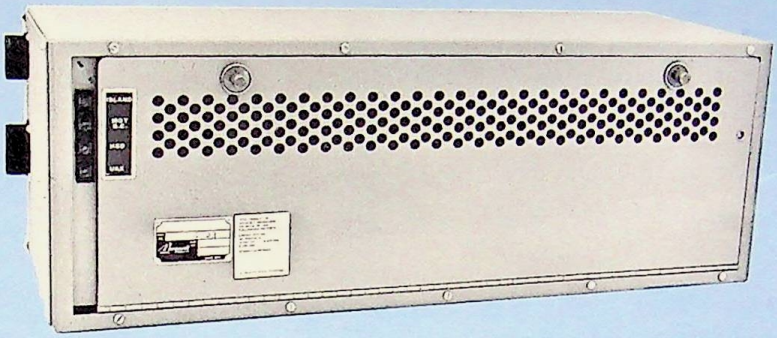
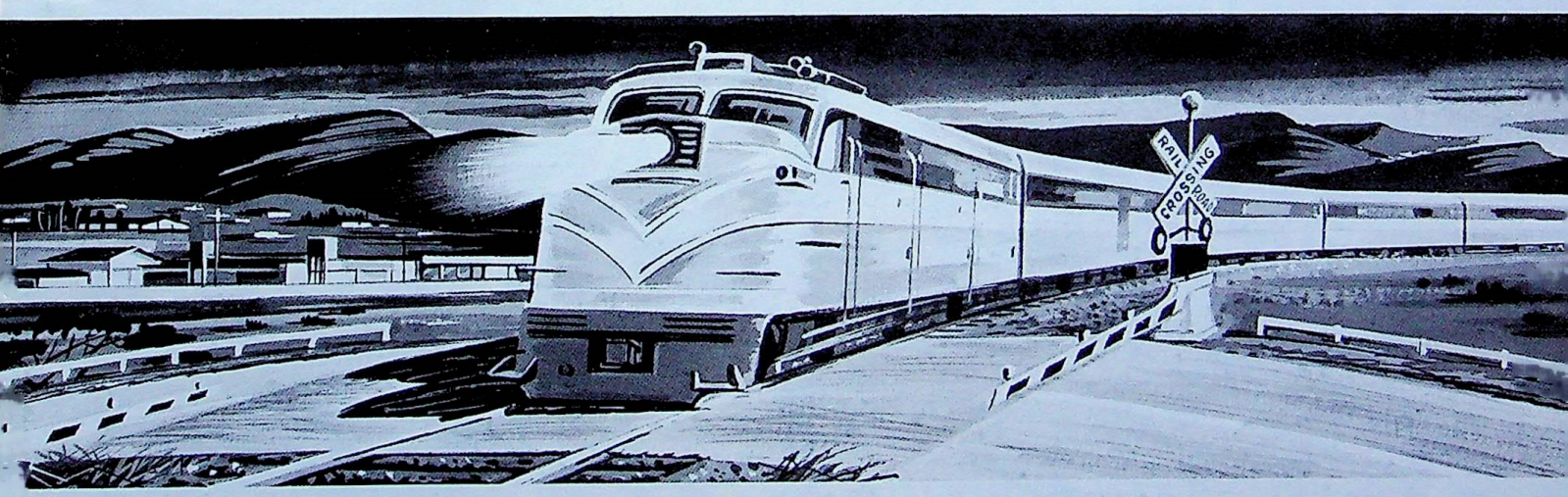
MOTION SENSOR



HIGHWAY CROSSING PROTECTION SYSTEM

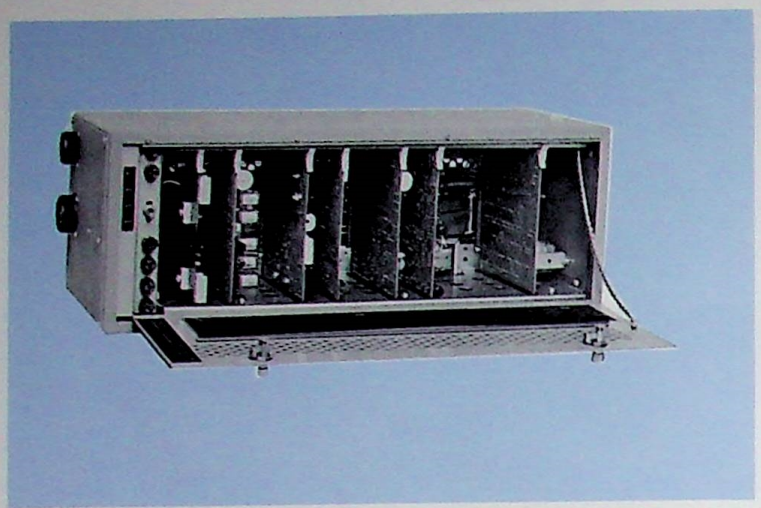


Safetran

MARQUARDT INDUSTRIAL PRODUCTS CO.

9271 ARROW HIGHWAY CUCAMONGA, CALIFORNIA 91730

(714) 987-4673



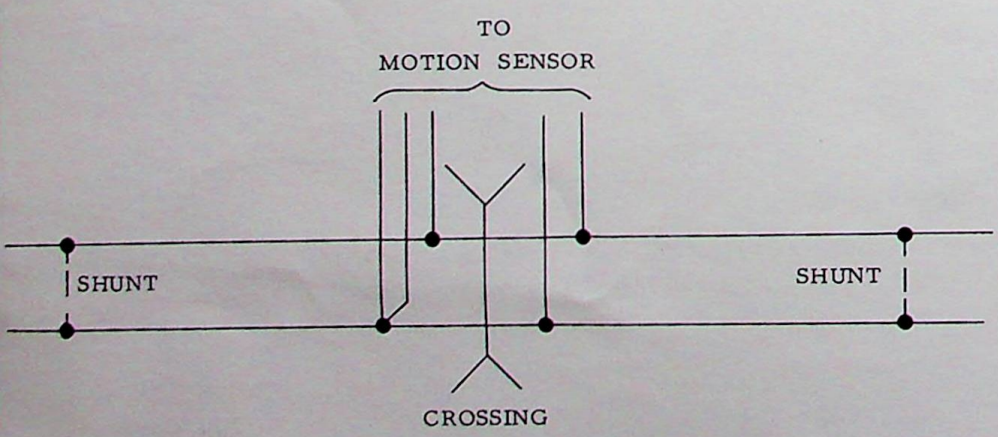
DOES NOT REQUIRE INSULATED JOINTS

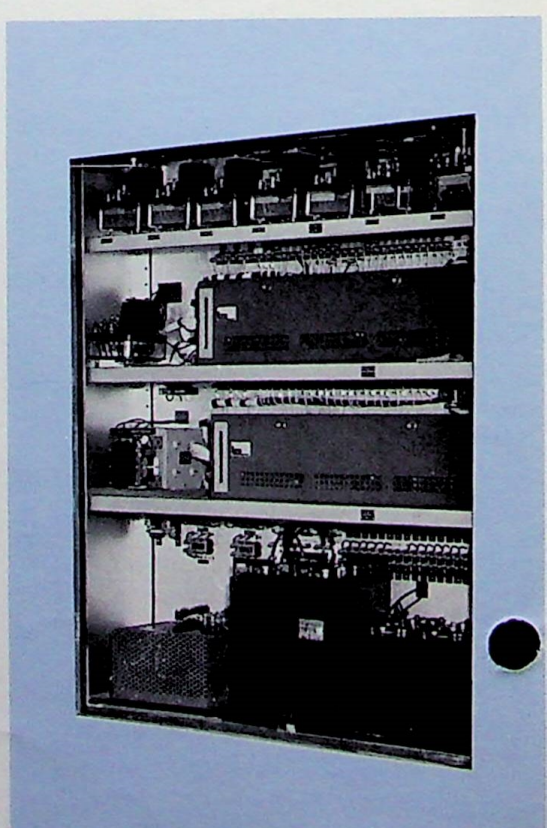
- Self-check every 6 seconds
- Low signal detector
- Low gain detector
- High signal detector (broken rail)
- High noise immunity

The Motion Sensor responds to approaching motion of a train and will activate crossing protection equipment if the train speed is 2 mph or greater. When the train passes the crossing the Motion Sensor will clear the crossing protection.

If a train stops before reaching the crossing or backs away, the crossing protection will clear when the approaching motion is no longer sensed. When forward motion of the train is resumed, the crossing protection will be reactivated until the train clears the crossing.

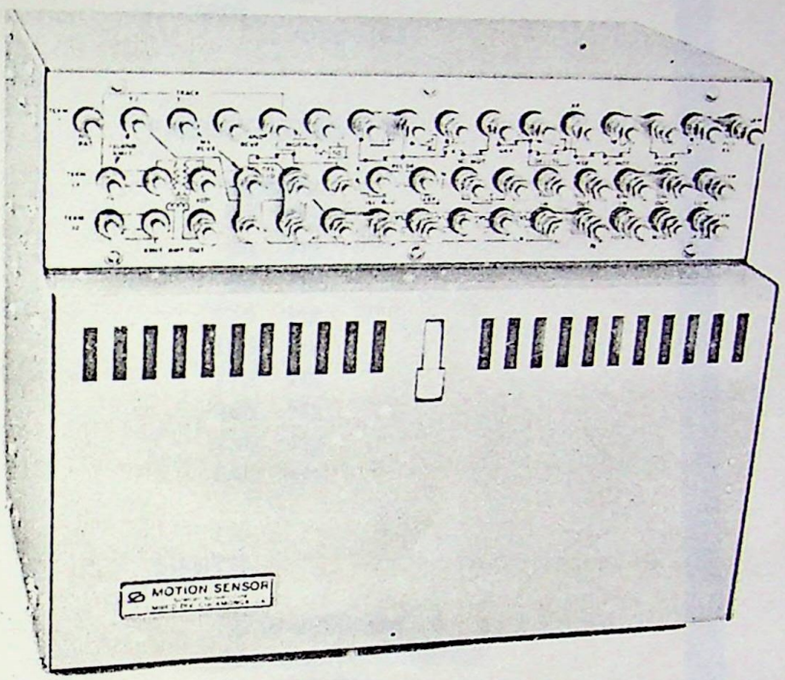
The Motion Sensor incorporates an independent transceiver for island circuit control, which is independent of train motion and activates the crossing protection whenever a train enters or occupies the island.





MOTION SENSOR

HIGHWAY CROSSING PROTECTION SYSTEM



NEW MOTION SENSOR CASE

- Standard AAR Terminals
- Smaller Case
- Simplified Wiring
- Less Installation Time

The Model 6A350 Motion Sensor, currently produced, replaces the Model 6A300 Motion Sensor. It retains all the performance features of the original unit, but is more compact and simpler to install, the 6A350 is 14 inches high, 10 inches deep, and 16¾ inches long compared with 10 inches high, 10 inches deep, and 27 inches long for the 6A300. The 6A350 has 46 front panel mounted AAR terminals that replace the two input cables used with the 6A300. Another major feature of the 6A350 is the internal location of the adjustable inductor (8A398-6) and the track drive transformer (8A405-1).

Elimination of input cables results in a considerable savings of material and labor. A typical bidirectional installation requires only 9 wires, consisting of 5 track wires, 2 battery wires, a ground wire, and a wire for the crossing relay control. All other connections and jumpers are made on the front panel terminal board of the Motion Sensor.

Internal circuits and descriptive nomenclature, along with terminal numbers, are etched on the front panel for easy identification without resorting to the instruction manual. The adjustable inductor is wired to terminals 37 through 43. The equivalent footage between terminals is etched into the panel. After the effective track length has been determined, the unused distances are simply jumpered out.

SPECIFICATIONS

INPUT REQUIREMENTS

Voltage
8.0 to 14.0 VDC

Current
5 Amperes

FREQUENCIES (Hz)

26.5 Hz
37 Hz
78 Hz
86 Hz
114 Hz
156 Hz
172 Hz
285 Hz
430 Hz
645 Hz

LIMITS

Up to 5000 feet
Approach unbalance
2 to 90 MPH
Ballast — Low as 2 ohms/1000 feet (distributed) depending on frequency

PHYSICAL

Length	27 inches
Height	10 inches
Width	10 inches
Weight	65 pounds

ENVIRONMENTAL

Temperature
—40°F to +160°F

Humidity
95% at +95°F

ORDERING INFORMATION

ORDER

Description	Part No.
Motion Sensor	6A300
Input Cable Assembly	6A329-1 and 6A329-2
Adjustable Inductor (Two required for unidirectional installation over 3000 feet)	8A398-6

Track Drive Transformer 8A405-1

SPECIFY

Motion Sensor Frequency _____Hz

Short Range Track Circuit Frequency _____Hz

Battery Voltage _____VDC

Shipping Instructions

FOLLOWING ITEMS MAY BE REQUIRED, DEPENDING ON INSTALLATION

Description	Part No.
Wide Band Shunt	8A076
Dual Wide Band Shunt (Optional)	8A077
Narrow Band Shunt	8A075-XX
Tunable Narrow Band Shunt	8A275-XX
Oscillator Coupling Unit	6A305-1
Battery Choke (Required when DC track circuits are also used)	8A065A
UAX Relay Kit (For delayed pickup of XR)	8K001-XX
Repeater Relay Assembly (Required for unidirectional installation)	6A306-1

The Motion Sensor is relatively simple to install. However, for complex installations, a MIPCO/RACO representative will gladly assist in the selection of frequencies, accessories, and any other special considerations.

MARQUARDT INDUSTRIAL PRODUCTS CO.

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Representatives

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Canada — Vale Enterprises, Ltd., 1120 Claire Crescent, Lachine, Quebec, Canada Telephone: 514-637-2388

Foreign — INTMA, Lincoln Building, 60 East 42nd Street, Suite 417, New York, N.Y. 10017